

1 MSRTMARTRPGQLG--RVTGAGGWGSAAVC 1342011  
1 MATPVPPSPRHLRLRLRLSG-----LI 1342011  
29 RGRALRGREPALPSASFPPDVAAACPGSLDCA 1342011  
25 LGALNG-----ATAARRPDATTCPGSLDCA 1342011  
59 LKRRARCPPGAHAACGPPCLQPFPQEDQQQLCV 1342011  
50 LKRRARKCPPGAHAACGPPCLQSFQEDQRFCCV 1342011  
89 PRMRPPPGGGRPPQPRRLEDEIDFLAQELA-- 1342011  
80 PRKHLSSGEGLPQPRLLEEIEDSLAQELA LK 1342011  
117 RKE SGHS---TPPLPKDRQRLPEPA-TLGF 1342011  
110 EKEAGHSRLTAQPLLERAQKLLEPAATLGF 1342011  
143 SARGQGLELGLPSTPGTPTTPHTSLGSPV 1342011  
140 SQWQQLLEPLGLPSTHGTSSPIPHTSLSRA 1342011  
173 SSDPVHMSPLLEPRGGQGGDLALVLI LAF CV 1342011  
170 SSGPVQMSPLLEPQGRHGNGLTLVLI LAF CL 1342011

FIGURE 1A

|     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |          |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|----------|
| 203 | A | G | A | A | A | L | S | V | A | S | L | C | W | C | R | L | Q | R | E | I | R | L | T | Q | K | A | D | Y | A | -        | 1342011  |
| 200 | A | S | S | A | A | L | A | V | A | A | L | C | W | C | R | L | Q | R | E | I | R | L | T | Q | K | A | D | Y | A | A        | GI452276 |
| 232 | T | A | K | A | P | G | S | P | A | A | P | R | I | S | P | G | D | Q | R | L | A | Q | S | A | E | M | Y | H | Y | Q        | 1342011  |
| 230 | T | A | K | G | P | T | S | P | S | T | P | R | I | S | P | G | D | Q | R | L | A | H | S | A | E | M | Y | H | Y | Q        | GI452276 |
| 262 | H | Q | R | Q | Q | M | L | C | L | E | R | H | K | E | P | P | K | E | L | D | T | A | S | S | D | E | E | N | E | D        | 1342011  |
| 260 | H | Q | R | Q | Q | M | L | C | L | E | R | H | K | E | P | P | K | E | L | E | S | A | S | S | D | E | E | N | E | D        | GI452276 |
| 292 | G | D | F | T | V | Y | E | C | P | G | L | A | P | T | G | E | M | E | V | R | N | P | L | F | D | H | A | A | L | S        | 1342011  |
| 290 | G | D | F | T | V | Y | E | C | P | G | L | A | P | T | G | E | M | E | V | R | N | P | L | F | D | H | S | T | L | S        | GI452276 |
| 322 | A | P | L | P | A | P | S | S | P | P | A | L | P |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1342011  |          |
| 320 | A | P | V | P | G | P | H | S | L | P | P | L | Q |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | GI452276 |          |

FIGURE 1B

09/807452

1 M A V N V Y S T S V T S E N L S R H D M L A W V N D S L H L 1880041  
1 M A V N V Y S T S V T S D N L S R H D M L A W I N E S L Q L GI 998357

31 N Y T K I E Q L C S G A A Y C Q F M D M L F P G C V H L R K 1880041  
31 N L T K I E Q L C S G A A Y C Q F M D M L F P G S I A L K K GI 998357

61 V K F Q A K L E H E Y I H N F K V L Q A A F K K M G V D K I 1880041  
61 V K F Q A K L E H E Y I Q N F K I L Q A G F K R M G V D K I GI 998357

91 I P V E K L V K G K F Q D N F E F I Q W F K K F F D A N Y D 1880041  
91 I P V D K L V K G K F Q D N F E F V Q W F K K F F D A N Y D GI 998357

121 G K D Y N P L L A R Q G Q D V A P P N P G D Q I F N K S K 1880041  
121 G K D Y D P V A A R Q G Q E T A V A P S L V A P A L N K P K GI 998357

151 K L I G T A V P Q R T S P T G P K N M Q T S G R L S N V A P 1880041  
151 K P L T S S S A A P Q R P I S T Q R T A A P K - - - A G GI 998357

FIGURE 2A

09/807452

|     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| 181 | P | C | I | L | R | K | N | P | P | S | A | R | N | G | G | H | E | T | D | A | Q | I | L | E | L | N | Q | Q | L | V | 1880041   |
| 177 | P | G | V | V | R | K | N | P | - | - | - | - | - | G | V | G | N | G | D | D | E | A | A | E | L | M | Q | Q | V | N | GI 998357 |
| 211 | D | L | K | L | T | V | D | G | L | E | K | E | R | D | F | Y | F | S | K | L | R | D | I | E | L | I | C | Q | E | H | 1880041   |
| 202 | V | L | K | L | T | V | E | D | L | E | K | E | R | D | F | Y | F | G | K | L | R | N | I | E | L | I | C | Q | E | N | GI 998357 |
| 241 | E | S | E | N | S | P | V | I | S | G | I | I | G | I | L | Y | A | T | E | E | G | F | A | P | P | E | D | D | E | I | 1880041   |
| 232 | E | G | E | N | D | P | V | L | Q | R | I | V | D | I | L | Y | A | T | D | E | G | F | V | I | P | D | E | G | G | - | GI 998357 |
| 271 | E | E | H | Q | Q | E | D | Q | D | E | Y |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1880041   |
| 261 | - | - | - | - | P | Q | E | E | Q | E | E | Y |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | GI 998357 |

FIGURE 2B

|     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |           |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|
| 1   | M | G | E | D | A | A | Q | A | E | K | F | Q | H | P | G | S | D | M | R | Q | E | K | P | S | S | P | S | P | M | P | 3201881   |
| 1   | M | G | E | D | A | A | Q | A | E | K | F | Q | H | P | N | T | D | M | L | Q | E | K | P | S | S | P | S | P | M | P | GI 455719 |
| 31  | S | S | T | P | S | P | S | L | N | L | G | N | T | E | E | A | I | R | D | N | S | Q | V | N | A | V | T | V | L | T | 3201881   |
| 31  | S | S | T | P | S | P | S | L | N | L | G | S | T | E | E | A | I | R | D | N | S | Q | V | N | A | V | T | V | H | T | GI 455719 |
| 61  | L | L | D | K | L | V | N | M | L | D | A | V | Q | E | N | Q | H | K | M | E | Q | R | Q | I | S | L | E | G | S | V | 3201881   |
| 61  | L | L | D | K | L | V | N | M | L | D | A | V | R | E | N | Q | H | N | M | E | Q | R | Q | I | N | L | E | G | S | V | GI 455719 |
| 91  | K | G | I | Q | N | D | L | T | K | L | S | K | Y | Q | A | S | T | S | N | T | V | S | K | L | L | E | K | S | R | K | 3201881   |
| 91  | K | G | I | Q | N | D | L | T | K | L | S | K | Y | Q | A | S | T | S | N | T | V | S | K | L | L | E | K | S | R | K | GI 455719 |
| 121 | V | S | A | H | T | R | A | V | K | E | R | M | D | R | Q | C | A | Q | V | K | R | L | E | N | N | H | A | Q | L | L | 3201881   |
| 121 | V | S | A | H | T | R | A | V | R | E | R | L | E | R | Q | C | V | Q | V | K | R | L | E | N | N | H | A | Q | L | L | GI 455719 |
| 151 | R | R | N | H | F | K | V | L | I | F | Q | E | E | N | E | I | P | A | S | V | F | V | K | Q | P | V | S | G | A | V | 3201881   |
| 151 | R | R | N | H | F | K | V | L | I | F | Q | E | E | S | E | I | P | A | S | V | F | V | K | E | P | V | P | S | A | A | GI 455719 |
| 181 | E | G | K | E | E | L | P | D | E | N | K | S | L | E | E | T | L | H | T | V | D | L | S | S | D | D | D | L | P | H | 3201881   |
| 181 | E | G | K | E | E | L | A | D | E | N | K | S | L | E | E | T | L | H | N | V | D | L | S | S | D | D | E | L | P | R | GI 455719 |
| 211 | D | E | E | A | L | E | D | S | A | E | E | K | V | G | R | S | P | R | G | R | E | I | K | R | S | - | - | - | R | P | 3201881   |
| 211 | D | E | E | A | L | E | D | S | A | E | E | K | M | E | - | E | S | R | A | E | K | I | K | R | S | S | L | K | K | V | GI 455719 |

FIGURE 3

6/9

|     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |            |            |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------|------------|
| 1   | M | S | F | L | L | P | K | L | T | S | K | K | E | V | D | Q | A | I | K | S | T | A | E | K | V | L | V | L | R | F          | 1438978    |
| 1   | M | S | Y | M | L | P | H | L | H | N | G | W | Q | V | D | Q | A | I | L | S | E | E | D | R | V | V | V | I | R | F          | GI 2565275 |
| 31  | G | R | D | E | D | P | V | C | L | Q | L | D | I | L | S | K | T | S | S | D | L | S | K | M | A | A | I | Y | L | 1438978    |            |
| 31  | G | H | D | W | D | P | T | C | M | K | M | D | E | V | L | Y | S | I | A | E | K | V | K | N | F | A | V | I | Y | L          | GI 2565275 |
| 61  | V | D | V | D | Q | T | A | V | Y | T | Q | Y | F | D | I | S | Y | I | P | S | T | V | - | F | F | F | N | G | Q | H          | 1438978    |
| 61  | V | D | I | T | E | V | P | D | F | N | K | M | Y | E | L | - | Y | D | P | C | T | V | M | F | F | F | R | N | K | H          | GI 2565275 |
| 90  | M | K | V | D | Y | G |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1438978    |            |
| 90  | I | M | I | D | L | G | T | G | N | N | N | K | I | N | W | A | M | E | D | K | Q | E | M | V | D | I | I | E | T | V          | GI 2565275 |
| 95  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1438978    |            |
| 120 | Y | R | G | A | R | K | G | R | G | L | V | V | S | P | K | D | Y | S | T | K | Y | R | Y |   |   |   |   |   |   | GI 2565275 |            |

FIGURE 4

1 M A A P E E R D L T Q E Q T E K L L Q F Q D L T G I E S M D 2024773  
1 M - - - E A D G L T N E Q T E K V L Q F Q D L T G I E D M N GI 3688609

31 Q C R H T L E Q H N W N I E A A V Q D R L N E Q E G V P S V 2024773  
28 V C R D V L I R H Q W D L E V A F Q E Q L N I R E G R P T M GI 3688609

61 F N P P P S - - - - - R P L Q - - - - V N T A D H R 2024773  
58 F A A S T D V R A P A V L N D R F L Q Q V F S A N M P G G R GI 3688609

78 I Y S Y V V S R P Q P R G L L G W G Y Y L I M L P F R F T Y 2024773  
88 T V S R V P S G P V P R S F T G I G Y V I N F V F Q Y - F GI 3688609

108 Y T I L D I F R F A L R F I R P D P R S R - V T D P V G D I 2024773  
117 Y S T L T S I V S A F V N L G G G N E A R L V T D P L G D V GI 3688609

137 V S F M H S F E E K Y G R A H P V F Y Q G T Y S Q A L N D A 2024773  
147 M K F I R E Y Y E R Y - P E H P V F Y Q G T Y A Q A L N D A GI 3688609

167 K R E L R F L L V Y L H G D - - D H Q D S D E F C R N T L C 2024773  
176 K Q E L R F L I V Y L H K D P A K N P D V E S F C R N T L S GI 3688609

195 A P E V I S L I N T R M L F W A C S T N K P E G Y R V S Q A 2024773  
206 A R S V I D Y I N T H T L L W G C D V A T P E G Y R V M Q S GI 3688609

225 L R E N T Y P F L A M I M L K D R R M T V V G R L E G L I Q 2024773  
236 I T V R S Y P T M V M I S L R A N R M I V G R F E G D C T GI 3688609

FIGURE 5A

255 P D D L I N Q L T F I M D A N Q T Y L V S E R L E R E R N 2024773  
266 P E E L L R R L Q S V T N A N E V W L S Q A R A D R L E R N GI 3688609

285 Q T Q V L R Q Q Q D E A Y L A S L R A D Q E K E R K K R E E 2024773  
296 F T Q T L R R Q Q Q D E A Y E Q S L L A D E E K E R Q R Q R E GI 3688609

315 R E R K R R K E E E V Q Q Q K L A E E R R R Q N L Q E E K E 2024773  
326 R D A V R Q A E E A V E Q A R R D V E L R K E E I A R Q K I GI 3688609

345 R K L E C L P P E P S P D D P E S V K I I F K L P N D S R V 2024773  
356 E L A T L V P S E P A A D A V G A I A V V F K L P S G T R L GI 3688609

375 E R R F H F S Q S L T V I H D F L F S L K E S P E K F Q I E 2024773  
386 E R R F N Q T D S V L D V Y H Y L F C H P D S P D E F E I T GI 3688609

405 A N F P R R V L P C I P S E E W P N P P - - - - - T 2024773  
416 T N F P K R V L F S K A N L D A A G E T G T A K E T L T K GI 3688609

426 L Q E A G L S H T E V L F V Q D L T D E 2024773  
446 L Q A V G L K N R E L L F V N D L - E A GI 3688609

FIGURE 5B



1 MEYLSALNPSDDLRLRSVSNISSEFFGRRVWTS 3869790  
1 MEYLSAFNPNGLRLRSVSTVSSSEL SRRVWN 3114594

31 APPPPQRPFRVCDHKKRTIRKGLTAAATRQELI 3869790  
31 APPPPQRPFRVCDHKKRTVRKGLTAAASLQELI 3114594

61 AKALETLLLNGLVLTLLVLEEDGTAVDSEDF 3869790  
61 DKVLETTLLLRGVLTLLVLEEDGTAVDSEDF 3114594

91 QLLEDDTCLMLVLLQSGQSWSPTRSGVLSYGI 3869790  
91 QLLEDDTCLMLVLEQGGQSWSP-KSGMLSYGI 3114594

121 GREERP KHSKDIARFTFDVYKQNPRDLFGSI 3869790  
120 GREKPKHSKDIARITFDVYKQNPRDLFGSI 3114594

151 NVKATFYGLYSMSCDFQGLGPKKVLRELLF 3869790  
150 NVKATFYGLYSMSCDFQGVGPKRVLRELLF 3114594

181 WTS TLQGLGHMLLGLSSSTLRHAEQW 3869790  
180 GTS S QLQGLGHMLLGLSSSTLRHVVEGADR 3114594

211 QQKG - - RLHSY 3869790  
210 QWHGQRHLHS 3114594

FIGURE 6